Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

## List of Claims:

 (Currently Amended) An intermittent aberrant component activity tracking method comprising:

continuously monitoring a component, the component comprising an encoder, wherein servo specifications of the encoder require a tolerance of  $\pm 0.1\%$  to  $\pm 5\%$ ;

sensing a characteristic of the component;

performing real time statistical calculations using sensed values of the characteristic of the component; and

storing, in a memory, data including results of the calculations indicative of a fault, wherein each data point of the data is put into a range bucket, and wherein the data are represented by a counter rather than a real encoder value.

- 2, (Original) The method of claim 1 further comprising providing for retrieval of the data.
- 3. (Original) The method of claim 1 further comprising uploading the data to a main controller at regular intervals.
  - 4. (Canceled)
- 5. (Previously Amended) The method of claim 1 wherein the sensed characteristic of the encoder is its timing.
  - 6. (Canceled)
  - 7. (Original) The method of claim I wherein the component is a sensor.

- 8. (Original) The method of claim 1 further comprising using a serial control bus to retrieve the data in real time.
  - 9. (Canceled)
- 10. (Currently Amended) The method of claim [9]1 further including incrementing an event count at a respective location when a data point falls into a range bucket.
  - 11. (Canceled)
- 12. (Original) The method of claim 1 wherein the main controller analyzes the data as necessary.
- 13. (Original) The method of claim 1 wherein only data values outside of normal run limits would be recorded and studied
  - 14. (Canceled)
  - 15. (Canceled)
  - 16. (Canceled)
  - 17. (Canceled)
  - 18. (Canceled)
  - 19. (Canceled)
  - 20. (Canceled)
  - 21. (Canceled)
  - 22. (Canceled)

- 23. (Canceled)
- 24. (Canceled)
- 25. (Currently Amended) A real time encoder frequency excursion recording method that can record excursions in real time on a product printed wire board assembly (PWBA) in an operating environment, the method comprising:

continuously monitoring the encoder timing, wherein servo specifications of the encoder require a tolerance of  $\pm 0.1\%$  to  $\pm 5\%$ ;

doing real time statistical calculations; and

storing the results of the calculations indicative of a fault in a memory for retrieval by service personnel or for uploading to the main controller at regular intervals during the run process.

wherein each data point of the results is put into a range bucket, and wherein the data are represented by a counter rather than a real encoder value.

- 26. (Canceled)
- 27. (Original) The method of claim 25 wherein only results values outside of normal run limits would be recorded and studied.
- 28. (Original) The method of claim 25 further comprising using a serial control bus to retrieve the data in real time.
  - 29. (Canceled)
- 30. (Currently Amended) The method of claim [29]25 further including incrementing an event count at a respective location when a data point falls into a range bucket.
  - 31. (Canceled)

32. (Original) The method of claim 25 wherein the main controller analyzes the data as necessary.